2012

Team Las Vegas Solar Decathlon 2013: Quickfacts

University of Nevada, Las Vegas. Solar Decathlon Team.

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“We will create a house with the future in mind. This is a worthy goal and a challenge that will give our students a unique experience of working on an energy-efficient home, which could have real applications in the marketplace.”

-Eric Weber, Architecture Professor

TEAM LAS VEGAS
SOLAR DECATHLON 2013
QUICKFACTS

About Solar Decathlon
• Sponsored by the U.S. Department of Energy to educate the public about the energy-saving opportunities from clean-energy products
• Twenty collegiate teams across the U.S. and beyond were chosen to create and operate ultra-efficient solar-powered houses
• Student-run project, with the guidance and support from faculty members
• Will take place October 3–13, 2013, at the Orange County Great Park in Irvine, California

About Team Las Vegas
An interdisciplinary collaboration of UNLV’s:
• Talented students with different backgrounds and expertise
• Top faculty members from various departments
• Dedicated university and community leaders

Team Mission Statement
• Team Las Vegas will design and build an ultra-efficient leisure home that educates and inspires the inhabitants of the Mojave Desert by using sun and water responsibly.

Competition Contests
The design will be evaluated in these contests:
1. Architecture – jury evaluates the design through documentation, visual presentation, narrative, and the final constructed project.
2. Market Appeal – jury evaluates the livability, marketability and buildability of the house.
3. Engineering – jury evaluates the design, efficiency, innovation and the documentation of the house.
4. Communications – jury evaluates the team website, audiovisual presentation, communications narratives, and onsite exhibit materials.
5. Affordability – professional cost estimators review the final constructed project cost.
6. Comfort Zone – the house must maintain temperatures between 71°F – 76°F, and the relative humidity must be lower than 60%.
7. Hot Water – the house must deliver 15 gallons of hot water at 110°F in 10 minutes or less.
8. Appliances – the appliances must meet the target temperatures and be able to accomplish the washing tasks defined in the competition’s rules.
9. Home Entertainment – this contest includes lighting, cooking, hosting dinner parties, operating TV and computer, and hosting movie nights.
10. Energy Balance – the house must produce at least as much energy as is consumed.

Contact Us
...Interested in Supporting the Team?
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**Support Team Las Vegas!**

Team Las Vegas’ selection to participate in the U.S. Department of Energy Solar Decathlon 2013 is a triumph for UNLV, Las Vegas, and the Mountain West Region. We are thrilled to have the opportunity to showcase our knowledge and represent our region in this international competition. Our success thus far is a testament to our innovative curriculum, dedicated faculty and students, and strong community partnerships, but we need your help to continue moving forward.

As our nation and the world focus more and more on renewable energy, it is essential that UNLV prepare students for the challenges that come with that reality. Through the creation of the Solar and Renewable Energy minor and graduate certificate programs, the Center for Energy Research, the Natural Energies Advanced Technologies Lab, the Urban Sustainability Initiative and Brookings Mountain West, UNLV has shown its enthusiasm and dedication to renewable energy education.

Team Las Vegas’ design of Desert Sol is geared specifically to our community’s unique ecosystem and will help drive research and new design ideas that are specific to life in the Mojave Desert. This is an important component, as renewable and sustainable living is becoming a way of life in our region and is vital to the long-term existence and growth of our community.

Being a part of this competition will be a life changing educational experience for our students and will prepare them for the rigors of the design profession. What they take from this experience will make them better designers and engineers, engaged community partners, and leaders in the growing field of renewable energy. This project also gives our students the opportunity to work in a multi-disciplinary team, learning not only architecture and engineering design techniques, but also business, communications, and community outreach.

We believe your involvement as a team sponsor will be a memorable experience as well. Your commitment is an investment in current students and future generations and will continue to impact and benefit greater Las Vegas by:

- Creating an educated and much-needed workforce with renewable energy expertise
- Extending research opportunities for renewable energy
- Investigating alternatives for lifetime living possibilities unique to our region
- Educating the community about the benefits of energy efficient living
- Diversifying our economy
- Positioning UNLV and Las Vegas on an international stage with other renowned universities

We are excited about the countless possibilities affiliated with this competition. Please join us as we endeavor to become leaders in the fields of solar power, renewable clean energy, water management, and other sustainability initiatives. We hope to count you as members of Team Las Vegas as we strive to win the 2013 Solar Decathlon!

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**Team Las Vegas Project Needs**

**Design and Communication**
- Website design
- 3D modeling & animation
- Physical modeling & materials
- Construction drawings & manuals
- Public exhibit materials
- Reprographic services
- Team uniform
- Video production

**Transportation and Assembly of House**
- Transportation of prototype house to competition
- Assembly/disassembly of the house during competition
- Transportation back to Las Vegas

**Participant Travel to Competition**
- Air travel to Orange County
- Local transportation in Orange County
- Hotels (short term and extended stay)
- Meals

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**Building Structure and Construction**
- Site construction & foundations
- Metal work
- Framing & insulation
- Wall & floor finishes
- Roofing & waterproofing
- Furnishings and casework
- Doors and windows
- Lighting fixtures
- Appliances and electronics
- Fire suppression
- Heating, ventilation, and air conditioning
- Plumbing
- Electrical
- Photovoltaics & solar thermal collectors
- Home automation control
- Landscaping & decking